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In the claims:

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9. (New) An intelligent data-network telephony (DNT) service control point (SCP), comprising:
a DNT-protocol router (DPR) node coupled to the DPN for receiving and routing DNT calls from callers to and through other DNT nodes;

one or more telephony applications executing in a computerized control system integrated with or coupled to the DPR, the one or more applications providing a service control point (SCP) preprocessing and further routing the DNT calls at the DPR; and

a DNT-capable interactive voice response (IVR) unit connected to the DPR;

wherein the SCP connects individual ones of the incoming DNT calls to the IVR, which elicits information from the callers, and the SCP uses the elicited information to further route the calls to destinations other than the original call destinations.

10. (New) The SCP of claim 9 wherein the computerized control system is a computer-telephony integration (CTI) server coupled to the DPR node by a data link.

11. (New) The SCP of claim 9 wherein one or more calls travel over the Internet network.

12. (New) The SCP of claim 9 further comprising functions for converting a call between conventional connection-oriented telephony (COST) protocol and DNT protocol, wherein one leg of a call is a COST call and another is a DNT call.

13. (New) The SCP of claim 9 further comprising functions for routing an incoming call to a conventional connection-oriented telephony (COST) destination number, by routing the incoming DNT call to a bridge unit elsewhere in the network.

14. (New) The SCP of claim 9 comprising a function for using one or more of real-time data

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network conditions, knowledge of quality-of-service (QoS) routes, routines for error routing, or skills-based routing rules in further routing of an incoming call.

15. (New) A method for providing a service control point (SCP) in a data-network telephony (DNT) network, comprising steps of:

(a) establishing a DNT-protocol router (DPR) node in the DPN for receiving and routing DNT calls from callers to and through other DNT nodes;

(b) executing one or more telephony applications in a computerized control system integrated with or coupled to the DPR, the one or more applications providing a service control point (SCP) preprocessing and further routing the DNT calls at the DPR; and

(c) coupling a DNT-capable interactive voice response (IVR) unit to the DPR, the IVR eliciting information from the callers, and using the elicited information to further route the calls to destinations other than the original call destinations.

16. (New) The method of claim 15 wherein the computerized control system is a computer-telephony integration (CTI) server coupled to the DPR node by a data link.

17. (New) The method of claim 15 wherein one or more calls travel over the Internet network.

18. (New) The method of claim 15 further comprising functions for converting a call between conventional connection-oriented telephony (COST) protocol and DNT protocol, wherein one leg of a call is a COST call and another is a DNT call.

19. (New) The method of claim 15 further comprising functions for routing an incoming call to a conventional connection-oriented telephony (COST) destination number, by routing the incoming DNT call to a bridge unit elsewhere in the network.

20. (New) The method of claim 15 comprising a function for using one or more of real-time data network conditions, knowledge of quality-of-service (QoS) routes, routines for error routing, or skills-based routing rules in further routing of an incoming call.

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21. (New) An intelligent data-packet network (DPN), comprising:
at least one intelligent data-network telephony (DNT) service control point (SCP), comprising a DNT-protocol router (DPR) node coupled to the DPN for receiving and routing DNT calls from callers to and through other DNT nodes, one or more telephony applications executing in a computerized control system integrated with or coupled to the DPR, the one or more applications providing a service control point (SCP) preprocessing and further routing the DNT calls at the DPR, and a DNT-capable interactive voice response (IVR) unit connected to the DPR;
wherein the at least one SCP connects individual ones of the incoming DNT calls to the IVR, which elicits information from the callers, and the SCP uses the elicited information to further route the calls to destinations other than the original call destinations.
22. (New) The DPN of claim 21 wherein the computerized control system is a computer-telephony integration (CTI) server coupled to the DPR node by a data link.
23. (New) The DPN of claim 21 wherein one or more calls travel over the Internet network.
24. (New) The DPN of claim 21 further comprising functions for converting a call between conventional connection-oriented telephony (COST) protocol and DNT protocol, wherein one leg of a call is a COST call and another is a DNT call.
25. (New) The DPN of claim 21 further comprising functions for routing an incoming call to a conventional connection-oriented telephony (COST) destination number, by routing the incoming DNT call to a bridge unit elsewhere in the network.
26. (New) The DPN of claim 21 comprising a function for using one or more of real-time data network conditions, knowledge of quality-of-service (QoS) routes, routines for error routing, or skills-based routing rules in further routing of an incoming call.